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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/591,209	07/11/2007	Stephan Rudiger Blum	4102-62PUS	6608
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EXAMINER				
CANTELMO, GREGG				
ART UNIT		PAPER NUMBER		
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/591,209

Applicant(s)

BLUM, STEPHAN RUDIGER

Examiner

Gregg Cantelmo

Art Unit

1795

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 August 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 37-70 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 37-70 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 August 2006 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☒ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/GS/US)
Paper No(s)/Mail Date 8/31/06
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Preliminary Amendment

1. In response to the preliminary amendment received August 31, 2006:

Claims 1-36 have been cancelled as per Applicant's request. New claims 37-70 are pending.

The preliminary amendment filed August 31, 2006 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: the amendments to the specification from "consists" to "comprised" or "including" is held to be new matter. First, the translation of the priority document appears to use "consists" and not "comprised", "includes" or "including" and the terms are materially different from one another since the term consists (consisting, etc.) is closed-ended terminology whereas "comprised", "includes" and "including" are open-ended. Applicant is not at liberty to change between these terms and broadening the term to "comprised", "includes" and "including" is held to introduce new matter to the instant application.

Applicant is required to cancel the new matter in the reply to this Office Action.

Priority

2. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Germany on March 3, 2004. It is noted, however, that applicant has not filed a certified copy of the German application as required by 35 U.S.C. 119(b).

Information Disclosure Statement

3. The information disclosure statement filed August 31, 2006 has been placed in the application file and the information referred to therein has been considered as to the merits.

Specification

4. The specification is objected to for introducing new matter as discussed above.

Drawings

5. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the electrode(s) passing through the capillary tubes or passing through and being pressed against each of the capillary tubes must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an

application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

6. Claims 37-70 are objected to because of the following informalities:
- a. With respect to claim 37, the term "fuel component" is misleading. Fuel is commonly referred to in the art as the reactant supplied to the anode or fuel electrode (hydrogen, methanol, etc.). However the capillary tubes of the specification are designed to permit flow of oxidant to the oxygen electrode or cathode. Use of term fuel is not consistent with general terminology in the art and applicant should refrain from using the term fuel component for the oxidant. With respect to claim 41, the phrase "connections are capable" should "connections that are capable". .
 - b. Claim 41 should be phrased, in part, as "...a switch, and electrical...".
 - c. Claim 66 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 66 recites a process or method condition such as an if/then relationship. However this fails to impart specific structure to the fuel cell of claim 66 and thus fails to further limit the fuel cell

Appropriate correction is required

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

7. Claims 37-70 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for electrodes being against the capillary tubes, does not reasonably provide enablement for electrodes passing through the capillary tubes or the combination of the electrodes being both against the capillary tubes and passing through the capillary tubes. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims.
8. Claims 37-70 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for all of the electrodes passing within and being against a respective capillary tube, does not reasonably provide enablement for electrodes merely passing through or being against the capillary tubes alone. In addition, the claims are written such that the claimed "at least one of the plurality of electrodes" is defined in relation to each of the plurality of capillary tubes which is clearly not the case since a given electrode such as electrode 41 of Fig. 10 passes through and is physically against a given capillary tube 34. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims. The scope of the claims

are held to extend well beyond that which the disclosed invention is entitled to and therefore the claimed invention fails to comply with 35 U.S.C. 112, first paragraph and enablement for said claimed invention. This issue is further exacerbated through various dependent claims combinations.

9. At least claims 49, 50 and 59 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. These claims recite the phrase "comprised" and as discussed above, the use of the term is not equivalent with the original terms such as "consists".

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

10. Claims 37-70 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With respect to claim 37: where applicant acts as his or her own lexicographer to specifically define a term of a claim contrary to its ordinary meaning, the written description must clearly redefine the claim term and set forth the uncommon definition so as to put one reasonably skilled in the art on notice that the applicant intended to so redefine that claim term. *Process Control Corp. v. HydReclaim Corp.*, 190 F.3d 1350, 1357, 52 USPQ2d 1029, 1033 (Fed. Cir. 1999). The term "fuel" in claim 37 is used by

the claim to mean "oxidant", while the accepted meaning is "hydrogen, methanol or other reactant supplied to the fuel electrode or anode in a fuel cell." The term is indefinite because the specification does not clearly redefine the term.

Claim 39 recites the limitation "the adjacent segment" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Claim 39 recites the limitation "the electrodes of a capillary tube" in line 1. There is insufficient antecedent basis for this limitation in the claim. In addition it is unclear as to which electrode(s) is connected to which counter-electrode/counterelectrode as there are plural electrodes, capillary tubes and counter-electrodes/counterelectrodes.

The phrase "the counterelectrode" of claims 46-48 are indefinite for it is unclear whether the counterelectrode/counter-electrode referred to in claims 46-48 are the same, different or in relation to the counter-electrodes recited in claim 37.

Claims 58-59 recites the limitation "the respective individual components" therein. There is insufficient antecedent basis for this limitation in the claims.

Claim 66 is indefinite. The claim recites an if/then relationship and thus fails to define the invention when the condition of claim 66 is not met. Furthermore the claim is indefinite for as the condition set forth in claim 66 fails to impart any additional structural limitations to the invention of claim 66.

Conclusion

11. Due to the numerous issues above, including various 112-1st and 2nd paragraph rejections above, no clear statement of patentability can be made at this point in prosecution.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Patent Application Publication No. 2002/0197520 and U.S. Patent Application Publication No. 2006/0246337 are cited of interest.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregg Cantelmo whose telephone number is 571-272-1283. The examiner can normally be reached on Monday to Thursday, 8:30-6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Pat Ryan can be reached on 571-272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Gregg Cantelmo/
Primary Examiner
Art Unit 1795